Catholic Healthcare West

FACT SHEET: Community Need Index™
A Breakthrough Approach to Public Health Planning

What: Catholic Healthcare West (CHW), the eighth largest hospital system in the nation, in partnership with Thomson Reuters, pioneered the Community Need Index (CNI) in 2005, which pinpoints the level of community need for every zip code in the United States. In 2011, CHW launched an online mapping tool that allows individuals and organizations nationwide to access their scores and show where vital community resources are located.

Where: www.chwHEALTH.org/cni

Why: Accurate measurement of community need is a crucial first step in public health planning. Most community-need assessments rely on highly specific, non-standardized data, the relevance of which is limited to the individual community. These specialized assessments will continue to be important for community planning. For large-scale public health programming, however, a comprehensive and standardized assessment of community need is a prerequisite to the allocation of resources by hospitals, health care organizations, private foundations, and public health systems.

Approach: In developing this tool, CHW applied the same level of scientific rigor we insist on in the practice of medicine. We partnered with Thomson Reuters to develop the data sets[1] and statistical models, which measure various socio-economic barriers to health care access. These barriers – income, cultural/language, education, insurance, and housing – were carefully chosen and tested individually by both Catholic Healthcare West and Thomson Reuters.[2]

Methodology: Using this baseline data we assign a score to each barrier condition. A score of 1.0 indicates a zip code with the lowest socio-economic barriers (low need), while a score of 5.0 represents a zip code with the most socio-economic barriers (high need). The scores are then aggregated and averaged for a final CNI score (each barrier receives equal weight in the average).

To be a truly accurate measure of access to care, the CNI would need to demonstrate that individuals in communities of higher need have more inpatient admissions (both in total and for admissions that would ideally be treated in an outpatient setting) given the barriers they face in obtaining primary care. In addition, the CNI should have little to no correlation with hospitalizations for conditions that would need to be treated on an inpatient basis regardless of socio-economic status (e.g., appendicitis). CHW and Thomson Reuters therefore also

[1] Data Sources: 2009 Demographic Data, Claritas, Inc. and 2009 Insurance Coverage Estimates, Thomson Reuters
[2] More information about the barriers and why they were selected can be found at www.chwHEALTH.org/cni

collected data on admission rates per 1,000 population for each zip code scored in the CNI.

Key Findings: Statistical analysis showed that total admission rates in general were higher in the communities with the highest CNI scores. In fact, admission rates for the most highly needy communities (CNI=5.0) were over 60 percent higher than communities with the lowest need (CNI=1.0).

When admission rates for only ambulatory care sensitive conditions[3] were compared to CNI scores, the correlation was even stronger. The most highly needy communities had admission rates for such conditions that were almost twice as high (97%) as rates for the lowest need communities. As hypothesized, those conditions that would need in-patient treatment regardless of socio-economic status did not vary with need, further supporting the validity of CHW's approach.

Implications: The CNI is helping to build coalitions between hospitals, health departments, clinics, health associations, and neighborhood centers. It is being used by hundreds of providers across the nation. With continued strategic use of the CNI to address the underlying causes of health disparity we can help improve health, control costs, and positively affect the quality of life across our nation.

CHW and Thomson Reuters have agreed to share the methodology with other health systems and community benefit organizations in an effort to improve community needs analysis nationally. With this tool, communities can focus quickly on the areas of most need and devote more time and resources to planning interventions that can assure health issues are addressed in sufficient time, and in the most cost effective settings.

Results: Costs for treating ambulatory care sensitive conditions across CHW's network of 40 hospitals were more than $261 million in fiscal year 2010. This represents more than 29,000 hospitalizations and more than 120,000 inpatient days.

Between 2008 and 2010, CHW hospitals invested $5.7 million in preventive and disease management programs for patients who had been hospitalized for asthma, diabetes, or congestive heart failure. This focus resulted in 8,917 individuals participating in disease management programs and a subsequent 86 percent reduction in readmissions for these patients.

Contact: For more information, visit www.chwHEALTH.org/cni or email communityneedindex@chw.edu

[3] Ambulatory care sensitive conditions include 17 diseases that, if treated properly in an outpatient setting, could result in reduced hospital admission. Such conditions include ear infections, pneumonia, and congestive heart failure.